



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,058	10/28/2003	Sinikka Sarkkinen	061715-0411 (US36613)	3865
30542 7590 07/19/2007 FOLEY & LARDNER LLP P.O. BOX 80278 SAN DIEGO, CA 92138-0278			EXAMINER MANOHARAN, MUTHUSWAMY GANAPATHY	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 07/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,058	<b>Applicant(s)</b> SARKKINEN ET AL.	
	<b>Examiner</b> Muthuswamy G. Manoharan	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claim 13 is rejected under 35 U.S.C. 101 because the disclosed invention is the claimed invention is directed to non-statutory subject matter.**

Applicant's claimed invention is related to method claim. Claims are seemingly a patentable process, however, applicant is seeking patent protection for computer programs, which is an abstract idea. Also, the claim limitations are nothing more than instructions from the computer program code. Therefore, it is clear that applicant is claiming computer program per se that does not produce tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 10 and 13** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

Art Unit: 2617

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In **claim 10**, applicant recites, "sending controller", "handling controller", "activating controller", "informing controller", "using controller", "selecting controller" that were not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In **claim 13**, Applicant recites "a computer program product" and "computer code" and were not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 10** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim the recitation of "**controlling devices of the radio access network being different from the controlling device of the radio access network**" is vague. How can the device be different from itself?

Appropriate correction is requested.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1,2,7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toth et al. (hereinafter Toth) (US 7107066) in view of (3GPP TS 25-346, V1.1.0 (2002-5)) (hereinafter Ref. A).**

Regarding **claim 1**, Toth teaches a method of coupling user equipment information specific to a multicast/broadcast service with a multicast/broadcast service context of a controlling device, wherein a multicast/broadcast service is provided within

Art Unit: 2617

a communication network comprising a core network and a radio access network, the core network comprising at least one serving device, and the radio access network comprising a plurality of user equipment, at least another serving device, and controlling devices, the method comprising (Abstract; Figure 3):

establishing a multicast/broadcast service context of a controlling device by a serving device of the core network (Col. 5, lines 63-67; Figure 3);

establishing a user equipment specific multicast/broadcast service context by the serving device of the core network, wherein this establishing procedure is capable of being effected at a different time from the controlling device multicast/broadcast service context establishing procedure (Col. 7, lines 5-15; "RAN is notified that the mobile station wants to join the MC group", Col. 8, lines 1-2; Col. 6, lines 32-35);

determining a respective location of user equipment which desire to join the broadcast service from a serving device of the radio access network by checking a respective list received from the serving device of the core network ("current location of members", Col. 3, lines 64-66);

sending a user equipment active list by the serving device of the radio access network informing the controlling device about the number of joined user equipment and the multicast/broadcast service in question, wherein the active list includes, if applicable, also respectively joined user equipment within a cell controlled by another controlling device ("current location of members", Col. 3, lines 64-66; Col. 4, lines 6-13; ; Col. 6, lines 32-35);

activating the multicast/broadcast service context in the serving device of the radio access network as an accepted service for the user equipment after receipt of successful coupling information from the controlling device ("**activation of the service**", Col. 5, lines 50-67, Col. 6, lines 1-67); and

informing the respectively joined user equipment by the serving device of the radio access network about the multicast/broadcast service ("The user may be notified ", Col. 5, lines 63-67).

Toth did not teach explicitly, the controlling devices being different from the at least another serving device; selecting a channel type by the controlling device for the connection of the multicast/broadcast service to the respectively joined user equipment; informing the serving device of the radio access network about the selection. However, Ref.A teaches the controlling devices being different from the at least another serving device (section 7.1.3, Figures 3 and 4); selecting a channel type by the controlling device for the connection of the multicast/broadcast service to the respectively joined user equipment; informing the serving device of the radio access network about the selection (Figure 2; Section 7.1.2, lines 4-5). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method wherein the controlling devices being different from the at least another serving device; selecting a channel type by the controlling device for the connection of the multicast/broadcast service to the respectively joined user equipment; informing the serving device of the radio access network about the selection. This modification is required in order to deliver MBMS service and also provides additional mobility.

Regarding **claim 2**, Toth teaches the method according to claim 1, wherein when the multicast/broadcast service context is activated in the serving device of the radio access network, the activated multicast/broadcast service context is taken into account when radio resource controlling states for the user equipment are updated (Col. 7, lines 5-15).

Regarding **claim 7**, Toth teaches a serving device of a core network comprising (Figure 3): a first controller adapted to establish a multicast/broadcast service context of a controlling device ("RAN", Figure 3) of a radio access network (Col. 5, lines 63-67; Figure 3);

a second controller adapted to establish a user equipment specific multicast/broadcast service context at a different time from establishing of the multicast/broadcast service context of the controlling device(**"mobile station moves and enters a new routing area"**, therefore, user specific service context has to be changed; MBMS service context of the controlling device of the radio access network has not changed; the new user equipment specific MBMS service context has to be established to reflect the changes at a different time; Col. 7, lines 5-12);

wherein at least one of the first controller or the second controller is adapted to send a list of respective locations of user equipment which desire to join the multicast/broadcast service (Col. 3, lines 64-66); and

wherein at least one of the first controller or the second controller is adapted to handle an unsuccessful context information from a serving device of the core network(Col. 7, lines 11-15; Col. 6, lines 48-49).



Toth did not teach specifically controlling radio network controller and also the controlling device of the radio access network being different from a serving device of the radio access network. However, Ref. A teaches in an analogous art, Controlling radio network controller and also the controlling device of the radio access network being different from a serving device of the radio access network (Section 7.1.3). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have the controlling radio network controller and also the controlling device of the radio access network being different from a serving device of the radio access network in order to provide additional mobility.

**Claim 11** is rejected for the same reason as set forth in claim 7.

**Claim 3,10,12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toth et al. (hereinafter Toth) (US 7107066) in view of (3GPP TS 25-346, V1.1.0 (2002-5)) (hereinafter Ref. A) and further in view of (3GPP TS 23-346, V1.1.0 (2002-9)) (hereinafter Ref. B).**

Regarding **claim 3**, Toth did not teach specifically if the selecting step and the selection informing step are not performed, the multicast/broadcast informing step includes an indication about the unsuccessful coupling of the respectively joined user equipment to the multicast/broadcast service. However, Ref. A teaches in an analogous art and if the selecting step and the selection informing step are not performed, the multicast/broadcast informing step includes an indication about the unsuccessful coupling of the respectively joined user equipment to the multicast/broadcast service ("**CRNC informs the SRNC when a MBMS service is no**

Art Unit: 2617

**longer delivered over a common transport channel under the CRNC for a UE connected to the SRNC**"; Page 10). Therefore, it would be obvious to one of ordinary skill in the art at the time invention to use the method of the selecting step and the selection informing step are not performed, the multicast/broadcast informing step includes an indication about the unsuccessful coupling of the respectively joined user equipment to the multicast/broadcast service. This modification helps in deciding about the alternate ways of delivering the MBMS service. Neither, Toth nor Ref.A teaches the method, wherein the multicast/broadcast service context of the controlling device is rejected. However, Ref. B teaches in an analogous art wherein the multicast/broadcast service context of the controlling device is rejected (**"if due to roaming restrictions the UE is not allowed to be ....the new SGSN rejects the routing area update with an appropriate cause"**, 3GPP TR 23.846 1.2.0; Page 36). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method wherein the multicast/broadcast service context of the controlling device is rejected. This modification validates UE's presence.

Claim 10 is rejected for the same reason as set forth in claims 1 and 3.

Claims 12 and 13 are rejected for the same reason as set forth in claims 1,2 and 3.

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth et al. (hereinafter Toth) (US 7107066) in view of (3GPP TS 25-346, V1.1.0 (2002-5)) (hereinafter Ref. A) and further in view of (3GPP TS 23-346, V1.1.0 (2002-9))**

Art Unit: 2617

**(hereinafter Ref. B) and further in view of Leung et al. (hereinafter Leung) (US 2003/0087653).**

Regarding **claim 4**, the combinations of Toth, Ref.A and Ref B did not teach specifically the method according to claim 3, wherein the serving device of the radio access network is allowed to decide whether the multicast/broadcast service informed in the multicast/broadcast service context of the controlling device is served to the user equipment by using user equipment specific dedicated channels (Note.: Toth teaches if the new SGSN has no previous context for this multicast group, it needs to attach to the multicast tree. Ref A teaches p-t-p, which requires dedicated channel). However, Leung teaches in an analogous art wherein the serving device of the radio access network is allowed to decide whether the multicast/broadcast service informed in the multicast/broadcast service context of the controlling device is served to the user equipment by using user equipment specific dedicated channels ("when the number of active users is within the threshold the call is transmitted over a dedicated channel", Paragraph [0009, 0012]). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the method wherein the serving device of the radio access network is allowed to decide whether the multicast/broadcast service informed in the multicast/broadcast service context of the controlling device is served to the user equipment by using user equipment specific dedicated channels to conserve energy.

***Allowable Subject Matter***

Claims 5 and 6 are objected to as being dependent upon a rejected base claim 3, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed on 5/29/2007 have been fully considered but they are not persuasive.

Applicant recites in Page 12 of the Remarks, "As described in the specification, **this advantage is particularly** realized when the SRNC and the CRNC are different controller, See e.g., Specification, Page, paragraph [0008]". It is not clear what advantage is particularly realized?.

The paragraph [0008] is reproduced for the convenience of the applicant.

[0008] Therefore, the present invention provides a method as well as a corresponding system and corresponding communication devices for performing the coupling, when the controlling radio network controller (CRNC) and the service radio network controller (SRNC) are different radio network controller (RNC).

Applicant argues that, "Rather, Toth merely merely discloses radio access nodes which perform both functionalities. There is no teaching or suggestion of different controllers in the radio network".

Physical RNC normally contains all the CRNC, SRNC and DRNC functionalities. Also, A SRNC may be a CRNC. Further, the reference B (3GPP) teaches the CRNC being different from the at least another serving device (Figure 4). Toth teaches plurality

Art Unit: 2617

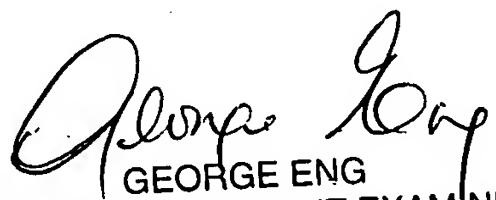
of RNCs. Therefore, one RNC could be a CRNC and the other could be a SRNC with modifications suggested by 3GPP (reference B).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muthuswamy G. Manoharan whose telephone number is 571-272-5515. The examiner can normally be reached on 7:00AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eng George can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
GEORGE ENG  
SUPERVISORY PATENT EXAMINER